DOCUMENT RESUME

ED 128 132 RC 009 408

AUTHOR Alao, Joseph A.
TITLE The Dilemmas of Modernizing Peasant Agriculture in Nigeria.
PUB DATE 8 Aug 76
NOTE 26p.; Not available in hard copy due to marginal legibility of original document. Paper presented at the World Congress of Rural Sociology (4th, Torun, Poland, August 8-14, 1976)

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS *Agricultural Production; Cultural Background; *Developing Nations; Extension Education; Financial Needs; Futures (of Society); Government Role; Institutions; *Land Use; *Problems; *Rural Farm Residents; *Technological Advancement
IDENTIFIERS Nigeria; World Congress of Rural Sociology (4th)

ABSTRACT

In 1965, the Nigerian government charged Nigerian agriculture with the long term developmental task of providing: (1) an adequate and well balanced food supply for the increasing population; (2) agricultural raw materials for domestic industries; (3) agricultural export earnings; (4) employment for the increasing labor force; and (5) capital for economic development. In order to accomplish these goals, Nigerian agriculture is going to have to engage in a comprehensive modernization effort that takes into account the institutional, technical, social, economic, and educational factors currently impeding change. Among these factors are: a communal land tenure system that deters land sales and new ownership, population mobility, investment of improvement capital, and agricultural innovation; a population drain from the rural areas caused by urban migration, farm drudgery, low farm profits, and the poor status rating of farm occupations (the average age of Nigerian farmers is 45, as the youth are seeking other occupations); an extension service that lacks qualified personnel, (one agent to 10,000 families), problem specific research, and peasant oriented personnel; a poorly structured credit system which lacks accessability, sufficient operating capital, professional management, etc.; and a social system that discourages the influence of "strangers". (JC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED128132

THE DILEMMAS OF MODERNIZING PEASANT AGRICULTURE IN NIGERIA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

by

DR. JOSEPH ADE. ALAO
Dept. of Extension Education and Rural Sociology,
University of Ife,
ILE - IFE
Nigeria.

BEST COPY AVAILABLE

Paper presented at the 4th World Congress for Rural Sociology, Torun Poland. August 8th - 14th, 1976.

RC009408

Seminar 10: Peasant Societies and the Dilemmas of Development.

THE DILEMMAS OF MODERNIZING PEASANT AGRICULTURE IN NIGERIA.

by

J. A. Alao

Characteristics of Nigerian Agriculture

One of the features of the third world countries is the predominance of peasant agriculture in which a disproportionate part of the total active labour force of the countries are engaged in agriculture, most of whom operate very small farms with emphasis on self-sufficiency at least in food production. Agriculture is generally regarded as a way of life and not as a business. Therefore the peasant farmers' objective in farming does not include profit motive, because there is no conscious planning for profit. In fact hardly do they reconcile either formally or informally their costs and returns at the end of the crop year. Since most of them are illiterates, they do not keep records of their farming expenses and incomes and hence cannot make scientifically rational choices among farm enterprises which to pursue. Therefore, the choice of enterprises is based on traditional motive for subsistence. Peasant Agriculture has low capital outlay and mechanization is practically non-existent. The drugery of farming is such that it makes agricultural occupation most unattractive to the young generations, and a resignation to fate by the young and the old who find themselves in the agricultural enterprise.[1] Peasant agricultural production is highly susceptible to even minor changes in weather and environmental conditions. This is further complicated by the inability of the peasants to do any thing about them.

---

1. In a recent survey under a rural development project in Ife Division of Oyo State Nigeria, Farming was independently rated 12th by rural youths and their parents and by only 11.6 percent of the respondents. Most salaried jobs were rated higher than farming.

The Organization of Nigerian Agriculture

The specific forms of the nature of peasant agriculture discussed above vary in their number and intensity depending on the country concerned. In this paper, I wish to illustrate in a more practical way, the nature of peasant agriculture from the organisation of agricultural production system in Nigeria.

Nigeria's agricultural production is based on small sized family holdings. Individual plots are small and generally less than half a hectare, and one farmer as a rule has his farm in three or more locations which could be geographically separated by ten or more kilometers. In most parts of the country, the farms are located far away from the place of residence or the community in which the farmer lives. Therefore the farmers have to commute from their villages to their farms either daily or at periodic intervals, such as weekly, bi-weekly or for longer periods, depending on the pressure of farm work. The further away the farm is from his home, the longer the commuting interval. Farmers who have farms which are distant from their villages generally establish farm-steads on their farm where they spend the nights while working on their farm. At peak seasons of labour requirements on the farm, farmers stay longer periods at the farmsteads than during slack periods.

Agricultural labour consists of the farmer his wife or wives and grown up children who are not otherwise in school and occasionally hired labourers during peak season labour requirements on the farm. All farmers aim at self-sufficiency in food production. Therefore all of them grow, at least, part of their food crops while most of the farmers grow cash crops as well.

Intercroping is the traditional system of crop husbandry. Under this condition, the farmer intercrops his food crops such as maize, yam, cassava (manihot) and vegetables on the same piece of land either simultaneously or in succession. The crops are either planted on the flat or on heaps made by the farmer with the aid of short handled hoe. Some cash crops such as cocoa, kola and plantains are always intercropped on the same piece of land. The Nigerian farmer undertakes no land management techniques. Therefore erosion control and soil fertility maintenance is done only through the traditional system of shifting cultivation. Under this system, the peasant farmer cultivates a piece of land for three or four consecutive years and then allows it to revert to bush while he cultivates another piece of land nearby or some distance away. He may then return to the old piece of land under bush fallow after a period of another four to six years by which time the soil would have regained its natural fertility.

One form of livestock or the other is found on Nigerian farms, but in practically all cases, they are raised for domestic consumption. In the southern parts of the country, chickens, goats and sheep are found in small numbers. Most of the cattle comes from the Northern parts of Nigeria because it is relatively free from tsetse-fly which is responsible for the endemic and debilitating disease of sleeping sickness in cattle in the South. Most of the Nigerian cattle is in the hands of nomadic fulanis who seasonally move from place to place with their hords of cattle in search of grazing land.

Each ecological zone of Nigeria provide naturally favourable environment for specific crops. Cocoa is grown mainly in the West, Rubber in the Central moist forests, and Oil palm in the Southern forest belt particularly in the

East. Groundnut, millet and guinea corn are grown in the dry intermediate savannah areas. Yams, cassava and maize are the staple foods of the southern areas of the country.

II The Task Facing Nigerian Agriculture

In 1966, the F.A.O. published its report on agricultural development in Nigeria from 1965-80, in which five major tasks facing Nigerian agriculture were identified.

(a) The first is to provide an adequate and well balance food supply for the growing population. Nigerian population is estimated to be increasing at an annual rate of about 4 percent. If this trend should continue the country will double its population every twenty-five years. Therefore food production must increase at an equal or faster rate than the rate of population increase if the nation is to be fed. It is my belief that Nigeria has the agricultural capacity to meet the challenge of the ever-growing food needs of its population in terms of quality and quantity. The second task is to (b) provide agricultural raw materials for domestic industries. This will involve increased process of certain foods for domestic consumption such as fruits and vegetables, a much greater degree of processing of food and agricultural raw materials before export and the provision of agricultural and forestry raw materials needed for Nigerian industry.

(c) The third is to provide Nigeria with agricultural export earnings if the economic and social objectives of the nation are to be attained. In spite of the oil boom, oil being a wasting asset, agriculture must continue to play its traditional role as a major earner of foreign exchange. Therefore Nigeria has to step up her volume of export of its major traditional

export crops such as cocoa, groundnut, rubber and oil palm, and also to develop others to a point that she could compete in the world market.

(d) The fourth task is to provide employment for increased population entering the labour force. The Nigerian agricultural labour force is expected to continue to be on the increase for some time both in absolute size and in proportion. This is because of rapid population increase which is not matched by rapid changes in employment opportunities outside agriculture. Therefore agrciclture must continue to provide greater opportunity for employment for increased number of Nigerians.

(e) Fifthly, agriculture is expected to contribute significantly to the capital required to finance economic development. About 60 percent of the GDP comes from agriculture. Therefore this should be a major source of financial resources needed for the development of the rest of the economy. Traditionally Nigerian agriculture has performed this role through direct and indirect taxations of farmers and their produce. It is also expected that agriculture itself must generate capital formation needed within agriculture itself to improve its productivity. It is only through increased efficiency of agricultural productivity that the country can achieve a release of increasing proportion of agricultural labour force for producing other goods and services. Also through this means, one could raise the per capita incomes of the agricultural population to keep pace with the living standards of those in the other sectors of the economy, and to lower the production costs of agricultural products. This will benefit the local consumers by reduction of terminal prices of agricultural consumer goods.

Potentials and Problems of Agricultural Modernization

III Efforts aimed at modernizing the Nigerian peasant agriculture have to

resolve several conflicting issues. In the subsequent pages, I shall deal with these issues which I have categorized into institutional, technical economic, social, and educational factors.

1 Institutional Factors: There are many institutional factors in the modernization of peasant agriculture in Nigeria. The first and foremost is the land tenure system in Nigeria. The tenure system is the foundation of structure of farming in Nigeria as well as in many other African countries. There can be no material changes in the structure of agriculture without changes in the system of tenure. Although the tenure system has been evolving slowly over the century, but the general attitude of peasants to land has not changed much. Most of the Nigerian land resource is communally owned. The smallest land owning unit is the extended family, all of whose members has equal rights to the use of the family land. Under the customary tenure system land cannot be appropriated or sold, hence it is none negotiable or transferable. Therefore, a person who is not a member of a land owning family has extreme difficulty in acquiring land by purchase for agricultural production. Nigeria has a total land area of 98.3 million hectares with a total cultivable land estimated at 71.2 million hectares. This is roughly 72.4 percent of the total land area. Less than half of the potential agricultural land is at present being utilized for productive purposes. However, there are pockets of land hunger in many parts of the country due to the interaction effects of tenure system and population pressure.

The land tenure system prevents mobility of people from areas of high population pressures to areas of low density of population in the country, for the purpose of acquiring land for farming, because the communities or families that own the land will not allow massive occupation of their land

by 'strangers' who have no obligations to the land owning group. Under the customary tenure, there are laid down principles for permanent and temporary transfer of agricultural land to non-members of the land-owning group. Permanent transfer is done to accredited 'strangers' who are no longer regarded as strangers but as adopted members of the land-owning family. This is after such a person should have been in the family-fold for several years. Temporary transfers are done on the understanding that the owners of the land may expel the occupant at the end of a crop season, or at the end of a specific period of lease.

It has been found for instance that the tenure system in Nigeria discourages rapid adoption of innovations by farmers. There is a limit to the kind of land improvement which could be undertaken by borrowers on temporary lease because of fear of eviction at any time. Also those who have temporary lease are not generally allowed to plant permanent crops so as not to tie over the use of the land to themselves for a relatively long time. In other to encourage increased productivity and modernize the agriculture, the ownership of land for cropping must be exclusive if the individual is to have the necessary incentive to undertake adequate improvement on the land without fear on losing part of the benefits.

The lack of clear individual title to land is a serious handicap to the investment of improvement capital. Land cannot be accepted by banks and other loan agencies as security or collateral for agricultural land improvement loans. Therefore in spite of government efforts to channel capital to agriculture, the condition for easy flow of capital to agriculture are difficult to fulfil. Even government credit and loan agencies require guarantees that loans approved for farmers would be paid back plus interest when

due. Unfortunately, land which is the most important resource which the farmer has cannot be used as collateral for agricultural loan since the farmer has no title to the land. The system of land tenure should be a concern for the government. The government is not only concerned with the conservation of natural resources, but with the best means of promoting agricultural production. According to Makings (1967) changes in land tenure are fraught with political risk and cannot be lightly undertaken in countries without a settled political history. But failure to make provision for change and to facilitate those modifications necessary if agriculture is to be restructured for production for market must hamper economic development. Although it has been possible for the Nigerian government under the law of land acquisition for public use to compulsorily acquire large tracts of land for the use by government for building government secretariats, public institutions such as schools and research stations, the law also provides that adequate compensation must be paid to the identified owners of such land. I underscored compulsory acquisition because there had been many suggestions in the past for the government to take over all the land owned by the nation and bring it under governmental control such as the way the government controls Nigeria's territorial waters and air spaces. But the problem is not that simple since it touches upon social political psychological and value orientations of most Nigerians. In certain parts of Nigeria anyone who does not have a usurfuctory right to farm land is not a free born. Unfortunately, I don't think any government in Nigeria will risk its political reputation over revolutionary (drastic far reaching) changes in the tenure syten of the country. Therefore, on the one hand, Nigeria has abundant land

resource to revolutionize her agricultural system, but on the other hand the land tenure system in most parts of the country makes this practically impossible.

(b) I mentioned earlier, that one of the features of agricultural organization in Nigeria is the tendency of farmers to have fractionalised holdings caused by two forces: (a) the system of shifting cultivation under which crop productivity depends on the naturally acquired fertility of the soil; and (b) the inheritance system by which all the children of the diseased share out his crop land. How can Nigeria approach the problem of economic holding for every farmer in only one location. What comes to mind is crop land consolidation. But there are many reasons why land cohsolidation will fail under the Nigerian agricultural system. First, the system of land tenure does not encourage transfer of land to anyone who does not belong. Second, it is extremely difficult to work out compensations for individual crops owned by each farmer. Third, there is an important question of extreme variations in soil fertility from one area to another and even within the same farm. The farmer may not be aware of this, but he is definitely aware of the crop carrying capacity of a soil. Fourth, it will be difficulty to reconcile allocation of tree crops different ages and at different levels of productivity. What will be the exchange rate of cocoa farm which is 40 years old to that which is only fifteen to twenty years old. Or what will a farmer exchange for his rubber or oil palm or bananas.

Another method which has been suggested as an effective means of adjusting the customary tenure to modern needs for development in agriculture is plantation agriculture. The colonial government in Nigeria discouraged plantation economy in West Africa through a conscious policy of preserving tradi-

tional tenure systems. But since independence, plantation agriculture has been experimented with by various Nigerian governments with varying degrees of failure. In fact Adegboye (1974) in reviewing land tenure in some parts of West Africa claimed that the use of plantation methods has not usually led to any significant improvement in farming technology or significant increase in output. On the contrary it has resulted in land pressure problems.

(c) What comes to mind as a ready solution to low capitalization in agriculture is the institution of credit facilities to farmers. For the first fifteen years of Nigeria's independence, the Federal government took no active part in agricultural development, in spite of the importance of agriculture to the country. The development of agriculture was left to the State governments. Most of the State governments established Agricultural Credit Institutions for awarding credit and loans to farmers. These institutions suffered from several difficulties. These are poor funding, inexperienced staffing, poor credit and loan administration, high rate of non-repayments, high interest rates and corrupt practices. Less than 15 percent of the loans issued went to farmers and out of this, less than one percent went to small scale (peasant) farmers. Oluwasanmi and Alao (1964) showed that between 1949 and 1960, public lending institutions in Nigeria made available to farmers a sum of ₦5.7 million, that is over 10 years period. Assuming the population remained static at 30 million between 1952 and 1960, and the proportion of active population engaged in farming to have been 11.3 million or 78 percent, the average loan per farmer in each of the years between 1955 and 1960 works out at less than 50 kobo.

A case study of 22 out of 209 Local Loans Boards in Western Nigeria in 1964 showed a rising demand for farm loans. Out of 20,434 farmers who applied for loans between 1957 and 1961 only 4,758 or 23.3 percent were granted loans. About 58 percent of these loans were under ₦40.00 in value, another 31 percent were above ₦200.00 each. Ijose and Abaelu (1973) reported that the magnitude of loan per farmer granted by the Local Loans Boards was ₦39.00.[1] Commercial banks have been notorious for not granting agricultural loans to farmers admittedly, because of the high risks involved and the inability of the peasant farmers to provide adequate collaterals for the bank loans. In order to combat this problem, the Federal Government established the Nigerian Agricultural Bank in 1974 to grant loans directly to individual farmers, groups of farmers and farmers cooperatives for agricultural production, poultry, horticulture fishing, forestry, animal production and for storage of agricultural products. Unfortunately, the bank was started off with an operating capital of only twenty million naira. It has few branch offices and its operation is entirely non-accessible to peasant farmers for whom the bank was established. Rather it has become a credit institution where other lending institutions could borrow money at low interest rates which can therefore service large farmers with such loans at increased interests, and this makes the loans unattractive to peasant farmers. The bureaucratic red tape in the lending procedure of the institutional credit sources makes it an intractable experience which farmers will not like to undergo. The credit institutions are far removed from the farmers villages. Therefore farmers have to travel long distances, and often times to the headquarters or to the sub-regional offices to complete forms, sign documents

---

1. ₦1 = U.S. $1.66 or £0.865 sterling.

and swear to affidavits and in all cases their guarantors have to be present in all the requested visits. In spite of these, the loans are invariably not released when the farmers need the loans. If it is loan in kind, such as pesticides, fertilizer or seeds, they may not be supplied until weeks too late. Therefore in spite of the fact that there is a clearly established need by farmers for the acquisition of new improved agricultural inputs, and improved technology, the government has failed to provide adequate support in terms of needed capital, the credit institutions have become bureaucratised and routinized and excessive red tape had made agricultural credit an intractable problem to potential borrowers. How does one ensure that agricultural credit reaches millions of small farmers in their villages at the right time and in sufficient amount, and to ensure relatively high repayment rates by farmers? Supervised credit has been tried in Nigeria but with limited measure of success. Experiences in Nigeria have shown that agricultural credit through farmers cooperative societies have had relatively high repayment rates but whether the loans were utilized for the sole purposes for which they were taken is another question which is yet to be answered. Perhaps a combination of supervised credit in cash and in kind tied to cooperative production and marketing of the agricultural produce might be worth trying. However, the quality of any organisation cannot be better than the quality of its personnel. The civil service procedure emphasizes seniority as a criterion for appointment into higher posts. Consequently, any administrator may find himself as chairman or director of an agricultural credit institution, based only on succession on the basis of seniority, rather than his special expertise in management of supervised agricultural credit sheme. It will be essential that some professional

qualification in Economics and Banking should be required of such an office and that the lower hierarchies of staff should be adequately trained to do a most effective job. This problem speaks loudly of any government establishment. Political considerations, while it may be a strong force to contend with, it is the country that will lose ultimately if these non-essential factors should be allowed to constitute enough barrier to national planning for economic progress of the country as a whole.

The family has traditionally been, and by and large is still, a unit of production and of consumption in Nigeria's agricultural system. But in recent years there has been tremendous changes in the Nigerian family system caused by stresses of modernization. The rural-urban exodus has robbed the country-side of its most virile active labour force. Within the last two decades, the average age of the Nigerian farmers has been moving up. Recent studies where the ages of farmers have been investigated showed the average age of Nigerian farmers to be over 45 years. Olayide (1974) estimated that between 1963 and 1972, the total rural and farm populations have dropped slowly from 80.80 percent to 76.50 percent rural, and from 18.32 percent to 17.95 percent farm, although in both cases the absolute population is still on the increase. See Table 1.

Table 1

Nigeria Estimated Population by Class Distribution

Year	Total Population (million)	Urban Population		Rural Population		Farmer Population	
		No. million	%	No.	%	No.	%
1963	55.67	10.7	19.2	44.9	80.8	10.2	18.3
1964	57.06	11.2	19.6	45.9	80.40	10.4	18.2
1965	58.50	11.7	19.9	46.8	80.10	10.6	18.15
1966	59.95	12.2	20.4	47.7	79.63	10.8	18.06
1967	61.45	12.76	20.8	48.68	79.2	11.42	18.58
1968	62.98	13.4	21.3	49.6	78.7	11.6	18.50
1969	64.56	14.1	21.9	50.4	78.1	11.9	18.4
1970	66.20	14.9	22.5	51.3	77.5	12.1	18.3
1971	68.16	15.7	22.9	52.5	77.0	12.4	18.1
1972	70.21	16.5	23.50	53.7	76.5	12.6	17.9

Source: Adapted from S.O. Olayide: External Economic Policies and Employment Promotion in Nigeria, University of Ibadan, 1974.

During the same period, urban population has increased both in absolute and in relative terms moving up from 10.7 million or 19.2 percent in 1963 to 16.5 million or 23.50 percent in 1972. One would expect that the birth rate of urban population is lower than that of the rural population in Nigeria, therefore the compensating factor in the rapid urban growth most probably comes from the rural-urban migration. The population group that has the highest propensity to migrate are those between the ages 14 and twenty-five years. Therefore, Nigeria's agricultural economy is facing a

situation of high population in agriculture with reduced capability to farm. The older farmers do not have the necessary incentive to increase their output, even if they do, they do not have the energy and the technical know-how. Consequently, most cocoa farms, oil palm plantations established forty-fifty years ago cannot be replanted by the farmers who now eke out their living at below subsistence level, with the uneconomic output of the cocoa farms. The drudgery of agricultural labour, the low profitability of agricultural enterprise, and the poor status rating of agricultural occupation coupled with increasing better opportunities outside agricultural employment are factors which discourage the absorption and retention of young people in farming. As far as any young Nigerian with or with no formal education is concerned, any paid employment is much preferred to agricultural employment. This is not surprising because a casual labourer working for a construction company in the city earns an average of ₦3.00 per day or ₦90.00 a month. Anyone who has had at least six or eight years of schooling can earn a minimum of ₦60.00 per month under the Udoji Salary Revision Scheme. Compare with an average farmer whose annual income is less than ₦300.00 or ₦25.00 per month. In fact the goal of the Third National Development Plan is to increase the per capita income of Nigerian farmers to ₦200.00 per annum.

Rural Values

In a recent study under Isoya Rural Development project under the auspices of the Department of Extension Education and Rural Sociology, University of Ife, Nigeria, rural youths were asked to mention the occupation of their choice which they would prefer. The occupational choices made by the youths in rank order are medical doctor, Agricultural officer, Engineer, Accountant, University Lecturer, Businessman, Lawyer, School teacher,

Pharmacist, Clergyman, Officer in the Nigerian Armed Forces. All these occupations ranked higher than farming by the youths. The fathers of the youths were independently asked to suggest a choice of occupation for their children. Again, farming ranked twelfth of the occupations, having been selected by only 11 percent of the parents. Out of the twenty-four different occupations suggested by the youths and their parents, the ranking by youths and parents were compared and a Spearman's rank correlation coefficient of 0.93 was obtained. This was significant at 0.001 level. I have given this particular example to illustrate the common dislike of farming as an occupation by both parents and youths that live in the rural areas.

d
Ag. Dev.

The Third National Development Plan expressed laudable intentions for the development of agriculture with an estimated capital expenditure of ₦2.201 billion for crops, livestock, forestry and fishing, ₦1.646 million or 74.8 percent for crops, ₦344.046 million or 15.6 percent for livestock, ₦109.727 million or 5 percent for forestry and ₦101.554 million or 4.6 percent for fisheries[1]. However, experiences with the two preceeding development plans showed that there was usually an underspending proportion of about 45 percent in the total estimate for agriculture. This is caused by inadequate staffing, over-ambitious targets which failed to take socio-economic factors into consideration, inflexible bureaucratic structure, and lack of executive capacity to carry out most of the programmes.

At the beginning of a new financial year on the 1st of April 1976, the head of state announced a budget which has been christened in many quarters

---

[1] Federal Republic of Nigeria 3rd National Development Plan 1975-80 Vol. 1 p. 72, The Central Planning Officer, Federal Ministry of Economic Development, Lagos.

in the country as a budget of moderation. In it was a goal that the country should be self-sufficient in food production through "Operation Feed the Nation". The campaign would enable schools, colleges, universities, military units, institutions and individuals to grow all types of food crops and vegetables both for consumption and for disposal of the surpluses in the market. The head of state observed that there was no reason why Nigeria with so much arable land and manpower should continue to import food. At the same time, the government has commissioned a cash crop rehabilitation study because of the growing concern of the government for the dwindling production of major cash crops like cocoa, palm produce, cotton and groundnuts.[1] Every Nigerian shares the aspiration of the head of state and dreams of a country that is self-sufficient in food production without spending our foreign exchange earnings to buy food items from countries with less favourable, conditions for agricultural production. However, there is a gap between what is possible or feasible and what could obtains in practice. Nigeria has to face up to the structural problems of agricultural organization of peasant production. We should embark on measures the increases the efficiency of individual production level several times, which will thus release surplus labour from agriculture to the industrial sector of the economy.

Many people have argued that the operation feed the nation is a temporary solution for alleviating hunger, and that more permanent solutions to Nigerian agricultural production problems are yet to be evolved. I have discussed such problems as land tenure, education, marketing and distribution of available food, storage of excess production, diseases and pests and agricultural research.

---

(1) See Daily Times Thursday, April 1, 1976, p. 5.

(e)

The institutional link between research and the peasant farmers is extension service. Through the extension service, the peasant farmer is made aware of agricultural research findings on crops, livestock, soil management etc. so that he could make necessary changes in his traditional agricultural methods. In Nigeria the conduct of agricultural research and extension service are regarded by and large as the functions of the government. In most cases, the content of the research of the research stations and the deployment of extension services personnel tend to reflect government priorities which may have remote beneficial effects on the peasant agriculture. It is not surprising therefore that the research problems which the research scientists are mostly working on, are conceived within the frame-work of government priorities without necessarily reflecting the problems on peasant farms.

Therefore, when recommendations pass from the research stations to the Extension Service to sell to the farmers for adoption, some of the innovations and specific new methods and practices remain unadopted by the farmer because the farmer believes that he has a better answer in his traditional way for solving the same problem. I doubt if agricultural research workers in many developing countries have bought the philosophy of starting their research from the level of the farmer. That is, research workers should first learn what the farmers are doing, how they are doing it and why they are doing it that way. But hardly do we find an agricultural research scientist in Nigeria who has been to a peasant farmer's farm to learn at first hand about his problems in order to provide solutions to them.

Until recently, the practice among peasant farmers of growing a variety of crops mixed together on the same plot of land has always been regarded as

backward and primitive and not consistent with modern progressive agriculture. But recent deviant research efforts in the Agricultural Research Institute, Samaru, Zaria, and in the International Institute of Tropical Agriculture (I.I.T.A) Ibadan are yielding good results on mixed cropping as a salient method of agricultural production which, with some research effort could be improved upon for the benefit of the farmer.

In Nigeria, individual states control their own extension services and run them as they see fit while agricultural research and agricultural research institutes are controlled by the Federal government which also provides guidance for the institutes' research orientation. In most cases, funds are tied to specific research programmes, therefore agricultural problems that may be identified by local extension agents at the state level may not receive any attention by the research institutes due to lack of funds, time and resources to carry them out. When research reaches the stage of variety trials or locality performance tests of various crops and livestock, the cooperation of state extension services would be required. Such cooperation may be denied because the available extension staff are pre-occupied with state extension programme. Therefore there is no effective means of coordinating research and extension services each of which belongs to different levels of governmental organization.

Another dimension of extension problem is the dearth of trained extension personnel in the country. At present there is only one trained extension staff to about ten thousand rural families and this is grossly inadequate. The Field Overseer who is the extension personnel in direct and day to day contact with farmers has practically no training in agriculture.

At best he has been given three to six months training in one of the schools of agriculture, but in most cases, he does not have any agricultural training at all. His educational training consist only of 8 - 12 years of schooling. Even when there is relevant research information to communicate to the farmers, he may not be able to do this effectively. To be effective in communicating with farmers, an extension worker must know what and how to communicate with his clientele. He must be fully aware of the problems that confront the farmer in his bid to adopt agricultural innovations. There should be a reasonable gap in the knowledge level between the agent and the farmer, otherwise the agent loses respectability with the farmer. The present situation in Nigeria seems to show that the average farmer has not much faith in the extension agent and the extension services which he represents. On the other hand there is a mutual ignorance between research specialist and the field overseer as to the nature role and interrelationship of their work in helping the peasant farmers to help themselves.

Inspite of the shortage of trained extension personnel, one state director of extension service told me last year that he had 40 vacancies for Agricultural Officers, who have first degree in agriculture but there is no funds to fill the existing vacancies. Similar story may be repeated for all the other State Extension Services. There are four faculties of agriculture in the Nigerian Universities. These together graduate about 150 students annually. The Nigerian government is concerned about the low turn out and has requested the rate of production of agricultural graduates be increased. But inspite of the shortage of agricultural graduates to work in the various agricultural Ministries and in the extension services,

a host of those who are graduates of agriculture cannot secure employment in the various Ministries of Agriculture. As soon as they graduate or are ready for employment after their one year compulsory national youth service corps, a good number of them take employment as teachers of agricultural science in secondary schools, a job for which their training did not prepare them. In Nigeria up till now, agriculture is not a registrable profession like medicine, engineering and pharmacy. These together with changes in other sectors of the economy, have resulted in lowering the professional status rating of agriculture. Most of the best students entering our Universities prefer to study Medicine, Pharmacy, Engineering and other professional courses which are useful both in the public and in the private sectors of the economy. Therefore, increasingly faculties of agriculture have to be content with second rate students for admission to their undergraduate courses.

Research: public good or self esteem.

I have discussed agricultural research but in a different context in the earlier part of this paper. I wish to discuss again here the relevance of agricultural research in the Universities that have faculties of agriculture in Nigeria. In the Nigerian Universities, the criteria for advancement in any academic field are evidence of research publication, teaching and service to the University, or the nation, in that order of importance. Therefore the cliche of "publish or perish" has become the 'modus operandi' of every academics. This is as it should be. But where this system hurts the agricultural development of the nation is in the bitter realisation that there are some kinds of investigation or endeavours with considerable potential for public good which could be undertaken by the academics. But

the system has no means of rewarding such an effort. For instance an agronomist may be interested in helping to raise the level of production of farmers. In his course of work he may be involved in routine investigations which may not be publishable in any academic journal, but the useful results feed directly into improving the level of production of peasant farmers. This type of individual will become frustrated after some years because he would be found wanton in number of journal publication. Here lies a dilemma whereby an academic appreciates what is required to improve the countries agricultural productivity but saves his energy to do only those things that are recognised by the system and which will bring him personal reward. Therefore agricultural scientists tend to be laboratory or green-house bond where they can carry out good scientific work while the social scientist like the agricultural economists have resorted to secondary data clothed in glamorous but non-utilitarian analytical procedures to prognosticate economic trends and consequently evolve an economic policy for the country, knowing fully well in themselves that all their rationalizations are weak in empirical support.

Mechanization
- level appropriateness
- target pop'n

There is a consensus of opinion among the Nigerian public, in the government circles and among those who are concerned about modernizing Nigerian agriculture, that rapid mechanisation is the only answer to relieving peasant farmers from the present drudgery of farm work. However there are several unresolved issues about the mechanization of Nigerian agriculture. These include (a) What is the appropriate level of mechanisation that should be introduced? (b) What is the appropriate method for

introducing the technology? (c) Should the mechanization be aimed at the present generation of ageing farmers with their declining productivity and reduced physical capacity for work or (d) Should the mechanization be aimed at the young generation of farmers who would be probably educated and highly responsive to change? (e) How does one attract young men back into farming so that they may take advantage of the new technology in agriculture.

Experiences from other countries - Mexico and Ghana, to mention but a few, have shown that massive importation of tractors and other heavy machinery into the agricultural system turns out to be a curse rather than a blessing to the countries concerned. This is because such machinery are not made for the peculiar soil conditions of those countries. Soil scientists are vocal in claiming that the use of heavy machinery on friable tropical soils will cause unprecedented soil erosion and does extensive damage to soil fertility. Other have argued that it is not enough to import finished machinery from one country to another, but the whole technological package should be considered. These include the machines, the spare parts and the technical expertise required to keep the machines in working condition. Other people have argued that it is better for a country like Nigeria to develop its own type of agricultural machinery by combining knowledge of the local conditions with technological know-how from developed countries in order to achieve greater efficiency. To this end there are a lot of pioneering works going on at the Faculties of Technology and Departments of Agricultural Engineering in the Nigerian Universities.

But these centres cannot do more than develop and carry out tests of prototypes of agricultural machinery. To make them available for wide use in the country, commercial concerns have to take up the challenge and establish factories for large scale production of the machines. The government policy on agricultural mechanization is yet to be spelled out. When this is done it will serve as a blueprint for action in this direction.

Conclusion

In the foregoing pages, I have tried to highlight some of the problems and prospects of modernizing peasant agriculture in Nigeria. One cannot but come to the conclusion that there are complex problems of social, cultural, institutional, and economic nature most of which are interrelated, which calls for a holistic approach in overcoming them. The problems are further aggravated by the general high rate of change which has characterized the 20th century all over the world. Nigeria, and in fact the whole of Africa is a race in a hurry to achieve a sustained high level of social and economic development. She cannot afford to be left behind. But the dilemma still persists. It is painful to break away from the traditional past, but it is attractive to enjoy the fruits of rapid modernization which perforce requires change from the traditional. The situation calls for a revolutionary spirit, a vision to perceive what is good for the whole society as opposed to individual vested interests. It calls for dedication and self-sacrifice on the part of all to resolve the dilemmas.